SEQUENCE LISTING

<110> GENEFIELD, INC.

<120> METHODS OF SCREENING FOR USEFUL PROTEINS (AS AMENDED)

<130> 2144.0330000

<150> JP 2003-205139
<151> 2003-07-31

<150> JP 2003-416228
<151> 2003-12-15

<160> 56

<170> PatentIn version 3.1

<210> 1
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<220>
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<221> modified_base
<222> (20)..(20)
<223> Biotin is bonded to the 20th cytosine.

<400> 1
cccggtgcag ctgtttcatc cggaaacagc tgcacccccc gccgccccccc gtcct
55

<210> 2
<211> 36
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<222> (1)..(4)
<223> "Xaa" = any amino acids.

<220>
<221> MISC_FEATURE
<222> (6)..(8)
<223> "Xaa" = any amino acids.

<220>

<221> MISC_FEATURE
<222> (10)..(12)
<223> "Xaa" = any amino acids.

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<222> (14)..(17)
<223> "Xaa" = any amino acids.

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<222> (19)..(22)
<223> "Xaa" = any amino acids.

<220>
<221> MISC_FEATURE
<222> (24)..(31)
<223> "Xaa" = any amino acids.

<220>
<221> MISC_FEATURE
<222> (33)..(36)
<223> "Xaa" = any amino acids.

<400> 2

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Xaa Xaa Xaa Xaa Cys Xaa Xaa Xaa Cys Xaa Xaa Xaa Cys Xaa Xaa Xaa
1               5                   10                  15

Xaa Cys Xaa Xaa Xaa Xaa Cys Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Cys
            20                  25                  30

Xaa Xaa Xaa Xaa
        35
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<210> 3
<211> 36
<212> PRT
<213> Artificial

<220>
<223> an artificially synthesized sequence

<220>
<221> MISC_FEATURE
<222> (1)..(2)
<223> "Xaa" = any amino acids.

<220>
<221> MISC_FEATURE
<222> (4)..(12)
<223> "Xaa" = any amino acids.

<220>
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<222> (14)..(15)
<223> "Xaa" = any amino acids.

<220>
<221> MISC_FEATURE
<222> (17)..(21)
<223> "Xaa" = any amino acids.

<220>
<221> MISC_FEATURE
<222> (23)..(27)
<223> "Xaa" = any amino acids.

<220>
<221> MISC_FEATURE
<222> (29)..(31)
<223> "Xaa" = any amino acids.

<220>
<221> MISC_FEATURE
<222> (33)..(36)
<223> "Xaa" = any amino acids.

<400> 3
Xaa Xaa Cys Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Cys Xaa Xaa Cys
1 5 10 15

Xaa Xaa Xaa Xaa Xaa Cys Xaa Xaa Xaa Xaa Xaa Cys Xaa Xaa Xaa Cys
20 25 30

Xaa Xaa Xaa Xaa
35

<210> 4
<211> 215
<212> DNA
<213> Artificial

<220>
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<220>
<221> misc_feature
<222> (71)..(82)
<223> "n" = a, t, g, or c.

<220>
<221> misc_feature
<222> (86)..(109)
<223> "n" = a, t, g, or c.

<220>
<221> misc_feature
<222> (113)..(124)

<223> "n" = a, t, g, or c.

<220>
<221> misc_feature
<222> (128)..(139)
<223> "n" = a, t, g, or c.

<220>
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<222> (143)..(151)
<223> "n" = a, t, g, or c.

<220>
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<222> (155)..(163)
<223> "n" = a, t, g, or c.

<220>
<221> misc_feature
<222> (167)..(178)
<223> "n" = a, t, g, or c.

<400> 4
tttccccgcc ccccgtcctg cttccgccgt gatgatgatg atgatggcct ccgcttggag
60

ggccggaggg nnnnnnnnnn nnacannnnn nnnnnnnnnn nnnnnnnnna cannnnnnnn
120

nnnnacannn nnnnnnnnna cannnnnnnn nacannnnnn nnnacannnn nnnnnnnnca
180

tggtggcttg tagttgtaga atgtaaaatg taatg
215

<210> 5
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<212> DNA
<213> Artificial

<220>
<223> an artificially synthesized sequence

<220>
<221> misc_feature
<222> (38)..(43)
<223> "n" = a, t, g, or c.

<220>
<221> misc_feature
<222> (47)..(73)
<223> "n" = a, t, g, or c.

<220>

<221> misc_feature
<222> (77)..(82)
<223> "n" = a, t, g, or c.

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<221> misc_feature
<222> (86)..(100)
<223> "n" = a, t, g, or c.

<220>
<221> misc_feature
<222> (104)..(118)
<223> "n" = a, t, g, or c.

<220>
<221> misc_feature
<222> (122)..(130)
<223> "n" = a, t, g, or c.

<220>
<221> misc_feature
<222> (134)..(145)
<223> "n" = a, t, g, or c.

<400> 5
catggtggct tgtagttgta gaatgtaaaa tgtaatgnnn nnntgtnnnn nnnnnnnnnn
60

nnnnnnnnnn nnntgtnnnn nntgtnnnnn nnnnnnnnnn tgtnnnnnnn nnnnnnntg
120

tnnnnnnnnn tgtnnnnnnn nnnnnccctc cggccctcca agcggaggcc atcatcatca
180

tcatcacggc ggaagcagga cgggggggcgg ggaaa
215

<210> 6
<211> 37
<212> DNA
<213> Artificial

<220>
<223> an artificially synthesized primer sequence

<400> 6
cattacattt tacattctac aactacaagc caccatg
37

<210> 7
<211> 19
<212> DNA
<213> Artificial

<220>
<223> an artificially synthesized primer sequence

<400> 7
tttccccgcc ccccgtcct
19

<210> 8
<211> 117
<212> DNA
<213> Artificial

<220>
<223> an artificially synthesized primer sequence

<400> 8
gatcccgcga aattaatacg actcactata ggggaagtat ttttacaaca attaccaaca
60

acaacaacaa acaacaacaa cattacattt tacattctac aactacaagc caccatg
117

<210> 9
<211> 19
<212> DNA
<213> Artificial

<220>
<223> an artificially synthesized primer sequence

<400> 9
aggacggggg gcggggaaa
19

<210> 10
<211> 40
<212> DNA
<213> Artificial

<220>
<223> an artificially synthesized primer sequence

<400> 10
caacaacatt acattttaca ttctacaact acaagccacc
40

<210> 11
<211> 19
<212> DNA
<213> Artificial

<220>
<223> an artificially synthesized primer sequence

<400> 11
tttccccgcc ccccgtcct
19

<210> 12
<211> 117
<212> DNA
<213> Artificial

<220>
<223> an artificially synthesized sequence

<400> 12
gatcccgcga aattaatacg actcactata ggggaagtat ttttacaaca attaccaaca
60

acaacaacaa acaacaacaa cattacattt tacattctac aactacaagc caccatg
117

<210> 13
<211> 114
<212> DNA
<213> Artificial

<220>
<223> an artificially synthesized sequence

<220>
<221> misc_feature
<222> (33)..(89)
<223> "nnn" is repeated 19 times. In the "nnn", 1st n indicates mixtur
e of 13% T, 20% C, 35% A, 32% G, 2nd n indicates mixture of
24% T
, 22% C, 30% A, 24% G, and 3rd n indicates mixture of 37% T,
37%
C, 0% A, 26% G

<400> 13
acattctaca actacaagcc accatgggat gtnnnnnnnn nnnnnnnnnn nnnnnnnnnn
60

nnnnnnnnnn nnnnnnnnnn nnnnnnnnnt gtgaggggggg aggcagccat catc
114

<210> 14
<211> 61
<212> DNA

<213> Artificial

<220>
<223> an artificially synthesized sequence

<400> 14
tttccccgcc gccccccgtc ctgcttccgc cgtgatgatg atgatgatgg ctgcctcccc
60

c
61

<210> 15
<211> 247
<212> DNA
<213> Artificial

<220>
<223> an artificially synthesized sequence

<220>
<221> misc_feature
<222> (124)..(180)
<223> "nnn" is repeated 19 times. In the "nnn", 1st n indicates
mixtur
e of 13% T, 20% C, 35% A, 32% G, 2nd n indicates mixture of
24% T
, 22% C, 30% A, 24% G, and 3rd n indicates mixture of 37% T,
37%
C, 0% A, 26% G

<400> 15
gatcccgcga aattaatacg actcactata ggggaagtat ttttacaaca attaccaaca
60

acaacaacaa acaacaacaa cattacattt tacattctac aactacaagc caccatggga
120

tgtnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn
180

tgtgaggggg gaggcagcca tcatcatcat catcacggcg gaagcaggac ggggggcggc
240

ggggaaa
247

<210> 16
<211> 40
<212> DNA
<213> Artificial

<220>

<223> an artificially synthesized primer sequence

<400> 16
caacaacatt acattttaca ttctacaact acaagccacc
40

<210> 17
<211> 39
<212> DNA
<213> Artificial

<220>
<223> an artificially synthesized primer sequence

<400> 17
tttccccgcc gccccccgtc ctgcttccgc cgtgatgat
39

<210> 18
<211> 22
<212> PRT
<213> Artificial

<220>
<223> A peptide sequence encoded by selected DNA.

<400> 18
Met Gly Cys Ser Cys Gly Met Leu Cys Thr His Val Arg His His Ser
1 5 10 15

Arg Phe His Met Val His
20

<210> 19
<211> 22
<212> PRT
<213> Artificial

<220>
<223> A peptide sequence encoded by selected DNA.

<400> 19
Met Gly Cys Ser Asp Ser Ala Arg Val Pro Leu Gly Met Ala Val Cys
1 5 10 15

Val Thr Ser Ser Ala Ile
20

<210> 20
<211> 22
<212> PRT

<213> Artificial

<220>
<223> A peptide sequence encoded by selected DNA.

<400> 20
Met Gly Cys Ser Cys Gly Met Leu Cys Thr His Val Arg His His Ser
1 5 10 15

Arg Phe His Met Val His
20

<210> 21
<211> 19
<212> PRT
<213> Artificial

<220>
<223> A peptide sequence encoded by selected DNA.

<400> 21
Met Arg Ile Ser Arg Pro Val Met Asn Glu Gly Arg Trp Leu Ile Tyr
1 5 10 15

Leu Leu Ser

<210> 22
<211> 22
<212> PRT
<213> Artificial

<220>
<223> A peptide sequence encoded by selected DNA.

<400> 22
Met Gly Arg Ser Val His Phe Gly Leu Gln Cys Gly Asn Met Gly His
1 5 10 15

Val His Asp Ser Ile His
20

<210> 23
<211> 22
<212> PRT
<213> Artificial

<220>
<223> A peptide sequence encoded by selected DNA.

<400> 23
Met Gly Cys Ser Cys Gly Met Leu Cys Thr His Val Arg His His Ser

1 5 10 15

Arg Phe His Met Ala Asn
20

<210> 24
<211> 22
<212> PRT
<213> Artificial

<220>
<223> A peptide sequence encoded by selected DNA.

<400> 24
Met Gly Cys Ser Cys Gly Met Leu Cys Thr His Val Arg His His Ser
1 5 10 15

His Phe His Met Val His
20

<210> 25
<211> 22
<212> PRT
<213> Artificial

<220>
<223> A peptide sequence encoded by selected DNA.

<400> 25
Met Gly Cys Thr Leu Val Gly Ser Gly Asn Pro Asn Val Gly Ser Val
1 5 10 15

Ile His Leu His Cys His
20

<210> 26
<211> 22
<212> PRT
<213> Artificial

<220>
<223> A peptide sequence encoded by selected DNA.

<400> 26
Met Gly Cys Ser Cys Gly Met Leu Cys Thr His Val Arg His His Ser
1 5 10 15

Arg Phe His Met Val His
20

<210> 27

<211> 22
<212> PRT
<213> Artificial

<220>
<223> A peptide sequence encoded by selected DNA.

<400> 27
Met Gly Cys Ser Cys Gly Met Leu Cys Thr His Val Arg His His Ser
1 5 10 15

Arg Phe His Met Val His
20

<210> 28
<211> 22
<212> PRT
<213> Artificial

<220>
<223> A peptide sequence encoded by selected DNA.

<400> 28
Met Gly Cys Ser Cys Gly Met Leu Cys Thr His Val Arg His His Ser
1 5 10 15

Arg Phe His Met Val His
20

<210> 29
<211> 22
<212> PRT
<213> Artificial

<220>
<223> A peptide sequence encoded by selected DNA.

<220>
<221> MISC_FEATURE
<222> (19)..(19)
<223> "Xaa" = The site corresponding to termination codon.

<400> 29
Met Gly Cys Cys Asn Ser Thr Gly Val Val Val Gly Val Leu Phe Gly
1 5 10 15

Pro Asp Xaa Met His Cys
20

<210> 30
<211> 22
<212> PRT

<213> Artificial

<220>
<223> A peptide sequence encoded by selected DNA.

<400> 30
Met Gly Cys Ser Val His Phe Gly Leu Gln Cys Gly Asn Met Gly His
1 5 10 15

Val His Asp Ser Ile His
20

<210> 31
<211> 22
<212> PRT
<213> Artificial

<220>
<223> A peptide sequence encoded by selected DNA.

<400> 31
Met Gly Cys Ser Ser Met Ser Ser Val His Met Cys Phe Cys Pro Ala
1 5 10 15

Gly Arg Asp Val Ile Ser
20

<210> 32
<211> 22
<212> PRT
<213> Artificial

<220>
<223> A peptide sequence encoded by selected DNA.

<400> 32
Met Gly Cys Ile Thr Phe Ile Gly Glu Cys Gly Arg Phe Val Asp Gly
1 5 10 15

Gly Cys Phe Asn Asn Asn
20

<210> 33
<211> 22
<212> PRT
<213> Artificial

<220>
<223> A peptide sequence encoded by selected DNA.

<400> 33
Met Gly Cys Arg Ala Arg Gly Val Gly Val Asp Tyr Ile Ser Arg Arg

1 5 10 15

Asp His Lys Ser His His
20

<210> 34
<211> 22
<212> PRT
<213> Artificial

<220>
<223> A peptide sequence encoded by selected DNA.

<400> 34
Met Gly Cys Asp Leu Gln Arg Val Gly Cys Ala Val Ser Ala Thr Val
1 5 10 15

Glu Thr Cys Gly Asn Ser
20

<210> 35
<211> 22
<212> PRT
<213> Artificial

<220>
<223> A peptide sequence encoded by selected DNA.

<400> 35
Met Gly Cys Ser Cys Gly Met Leu Cys Thr His Val Arg His His Ser
1 5 10 15

Arg Phe His Met Val His
20

<210> 36
<211> 22
<212> PRT
<213> Artificial

<220>
<223> A peptide sequence encoded by selected DNA.

<400> 36
Met Gly Cys Ser Val His Phe Gly Leu Gln Cys Gly Asn Met Gly His
1 5 10 15

Val His Asp Ser Ile His
20

<210> 37

<211> 22
<212> PRT
<213> Artificial

<220>
<223> A peptide sequence encoded by selected DNA.

<400> 37
Met Gly Cys Thr Leu Val Gly Ser Gly Asn Pro Asn Val Gly Ser Val
1 5 10 15

Ile His Leu His Cys His
20

<210> 38
<211> 22
<212> PRT
<213> Artificial

<220>
<223> A peptide sequence encoded by selected DNA.

<400> 38
Met Gly Cys Ser Val His Phe Gly Leu Gln Cys Gly Asn Met Gly His
1 5 10 15

Val His Asp Ser Ile His
20

<210> 39
<211> 22
<212> PRT
<213> Artificial

<220>
<223> A peptide sequence encoded by selected DNA.

<400> 39
Met Gly Cys Ser Cys Gly Met Leu Cys Thr His Val Arg His His Ser
1 5 10 15

Arg Phe His Met Val His
20

<210> 40
<211> 22
<212> PRT
<213> Artificial

<220>
<223> A peptide sequence encoded by selected DNA.

<400> 40
Met Gly Cys Ser Cys Gly Met Leu Arg Thr His Val Arg His His Ser
1 5 10 15

Arg Phe His Met Val His
20

<210> 41
<211> 22
<212> PRT
<213> Artificial

<220>
<223> A peptide sequence encoded by selected DNA.

<400> 41
Met Gly Cys Ile Ser Ala Gly Asp Ser Val Cys Val Thr Asp Asn Val
1 5 10 15

Asp Leu Pro Ser Asn Thr
20

<210> 42
<211> 22
<212> PRT
<213> Artificial

<220>
<223> A peptide sequence encoded by selected DNA.

<400> 42
Met Gly Cys Ser Cys Gly Met Leu Cys Thr His Val Arg His His Ser
1 5 10 15

Arg Phe His Met His Arg
20

<210> 43
<211> 19
<212> PRT
<213> Artificial

<220>
<223> A peptide sequence encoded by selected DNA.

<400> 43
Ser Cys Gly Met Leu Cys Thr His Val Arg His His Ser Arg Phe His
1 5 10 15

Met Val His

<210> 44
<211> 19
<212> PRT
<213> Artificial

<220>
<223> A peptide sequence encoded by selected DNA.

<400> 44
Ser Val His Phe Gly Leu Gln Cys Gly Asn Met Gly His Val His Asp
1 5 10 15

Ser Ile His

<210> 45
<211> 19
<212> PRT
<213> Artificial

<220>
<223> A peptide sequence encoded by selected DNA.

<400> 45
Thr Leu Val Gly Ser Gly Asn Pro Asn Val Gly Ser Val Ile His Leu
1 5 10 15

His Cys His

<210> 46
<211> 8
<212> PRT
<213> Artificial

<220>
<223> an artificially synthesized peptide linker sequence.

<400> 46
Gly Gly Gly Ser Gly Gly Gly Ser
1 5

<210> 47
<211> 31
<212> PRT
<213> Artificial

<220>
<223> an artificially synthesized peptide sequence.

<220>

<221> MISC_FEATURE
<222> (31)..(31)
<223> "Xaa" indicates Glutathione S-Transferase.

<400> 47
Met Gly Cys Ser Cys Gly Met Leu Cys Thr His Val Arg His His Ser
1 5 10 15

Arg Phe His Met Val His Gly Gly Gly Ser Gly Gly Gly Ser Xaa
20 25 30

<210> 48
<211> 31
<212> PRT
<213> Artificial

<220>
<223> an artificially synthesized peptide sequence.

<220>
<221> MISC_FEATURE
<222> (31)..(31)
<223> "Xaa" indicates His-tag.

<400> 48
Met Gly Cys Ser Cys Gly Met Leu Cys Thr His Val Arg His His Ser
1 5 10 15

Arg Phe His Met Val His Gly Gly Gly Ser Gly Gly Gly Ser Xaa
20 25 30

<210> 49
<211> 105
<212> DNA
<213> Artificial

<220>
<223> an artificially synthesized sequence.

<400> 49
gggggatccg gttgctcatg tggcatgcta tgcacacatg ttcggcatca ttcacgattc
60
catatggtgc acggtggtgg atctggtgga gggtctcgaa ttcta
105

<210> 50
<211> 105
<212> DNA
<213> Artificial

<220>
<223> an artificially synthesized sequence.

<400> 50
tagaattcga gaccctccac cagatccacc accgtgcacc atatggaatc gtgaatgatg
60
ccgaacatgt gtgcatagca tgccacatga gcaaccggat ccccc
105

<210> 51
<211> 106
<212> DNA
<213> Artificial

<220>
<223> an artificially synthesized sequence.

<400> 51
actggatccg gttgctcatg tggcatgcta tgcacacatg ttcggcatca ttcacgattc
60
catatggtgc acggtggtgg atctggtgga gggtctcaag cttaat
106

<210> 52
<211> 106
<212> DNA
<213> Artificial

<220>
<223> an artificially synthesized sequence.

<400> 52
attaagcttg agaccctcca ccagatccac caccgtgcac catatggaat cgtgaatgat
60
gccgaacatg tgtgcatagc atgccacatg agcaaccgga tccagt
106

<210> 53
<211> 22
<212> PRT
<213> Artificial

<220>
<223> an artificially synthesized peptide sequence.

<400> 53
Met Gly Cys Ser Cys Gly Met Leu Cys Thr His Val Arg His His Ser
1 5 10 15

Arg Phe His Met Val His
20

<210> 54

<211> 22
<212> PRT
<213> Artificial

<220>
<223> an artificially synthesized peptide sequence.

<220>
<221> MISC_FEATURE
<222> (3)..(3)
<223> "Cys" indicates the cysteine that binds to 9th amino acid "Cys" by S-S bond.

<220>
<221> MISC_FEATURE
<222> (9)..(9)
<223> "Cys" indicates the cysteine that binds to 3rd amino acid "Cys" by S-S bond.

<400> 54
Met Gly Cys Ser Cys Gly Met Leu Cys Thr His Val Arg His His Ser
1 5 10 15

Arg Phe His Met Val His
20

<210> 55
<211> 22
<212> PRT
<213> Artificial

<220>
<223> an artificially synthesized peptide sequence.

<220>
<221> MISC_FEATURE
<222> (3)..(3)
<223> "Cys" indicates the cysteine that binds to 5th amino acid "Cys" by S-S bond.

<220>
<221> MISC_FEATURE
<222> (5)..(5)
<223> "Cys" indicates the cysteine that binds to 3rd amino acid "Cys" by S-S bond.

<400> 55
Met Gly Cys Ser Cys Gly Met Leu Cys Thr His Val Arg His His Ser
1 5 10 15

Arg Phe His Met Val His
20

<210> 56
<211> 22
<212> PRT
<213> Artificial

<220>
<223> an artificially synthesized peptide sequence.

<220>
<221> MISC_FEATURE
<222> (5)..(5)
<223> "Cys" indicates the cysteine that binds to 9th amino acid "Cys" by S-S bond.

<220>
<221> MISC_FEATURE
<222> (9)..(9)
<223> "Cys" indicates the cysteine that binds to 5th amino acid "Cys" by S-S bond.

<400> 56

Met	Gly	Cys	Ser	Cys	Gly	Met	Leu	Cys	Thr	His	Val	Arg	His	His	Ser
1				5					10					15	

Arg	Phe	His	Met	Val	His										
			20												